Full Service for SMB/Full Service Branch

IP communication for the branch. What only larger companies could afford !

Alexander Braumann
Systems Engineer

abrauman@cisco.com

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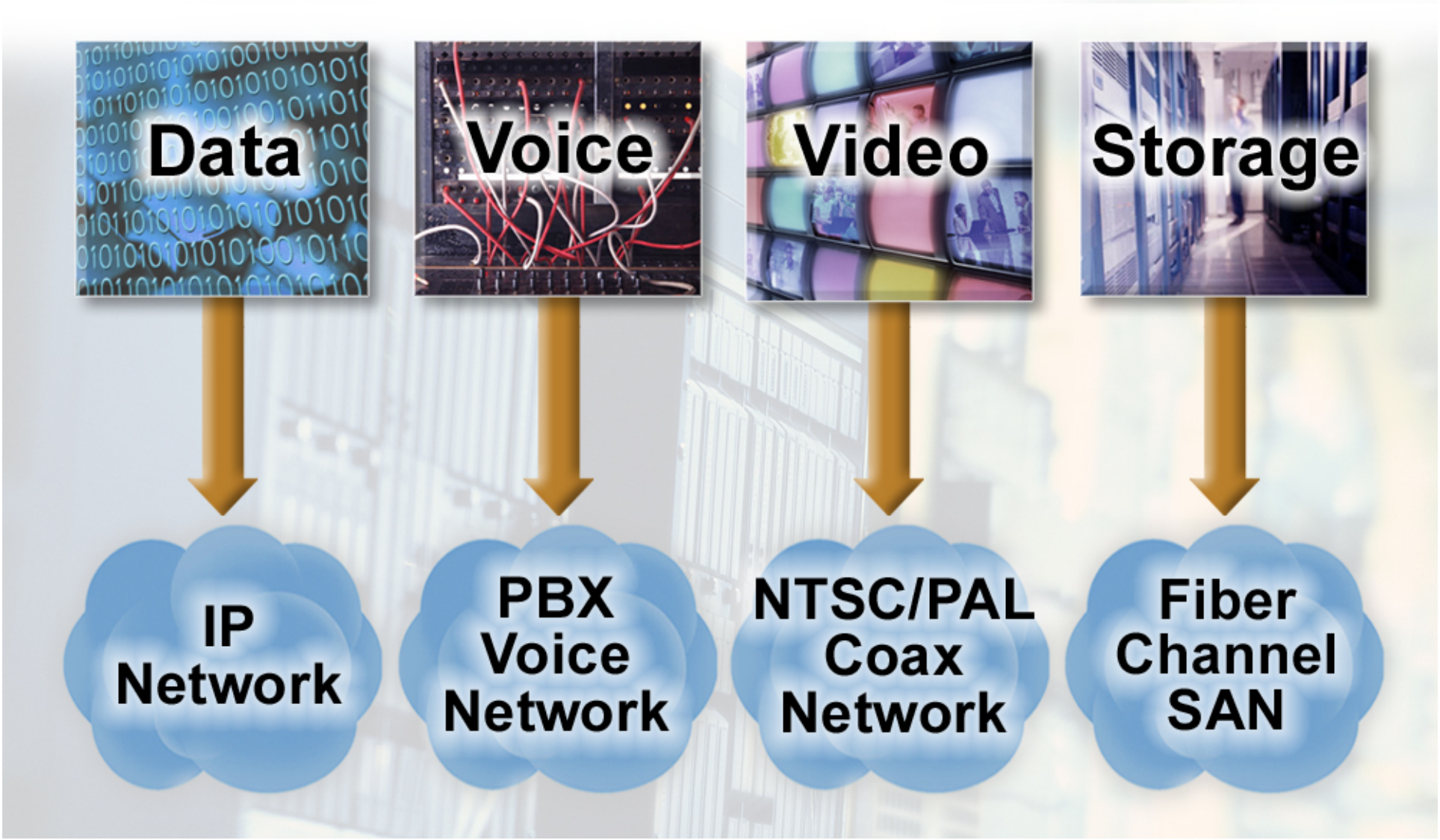
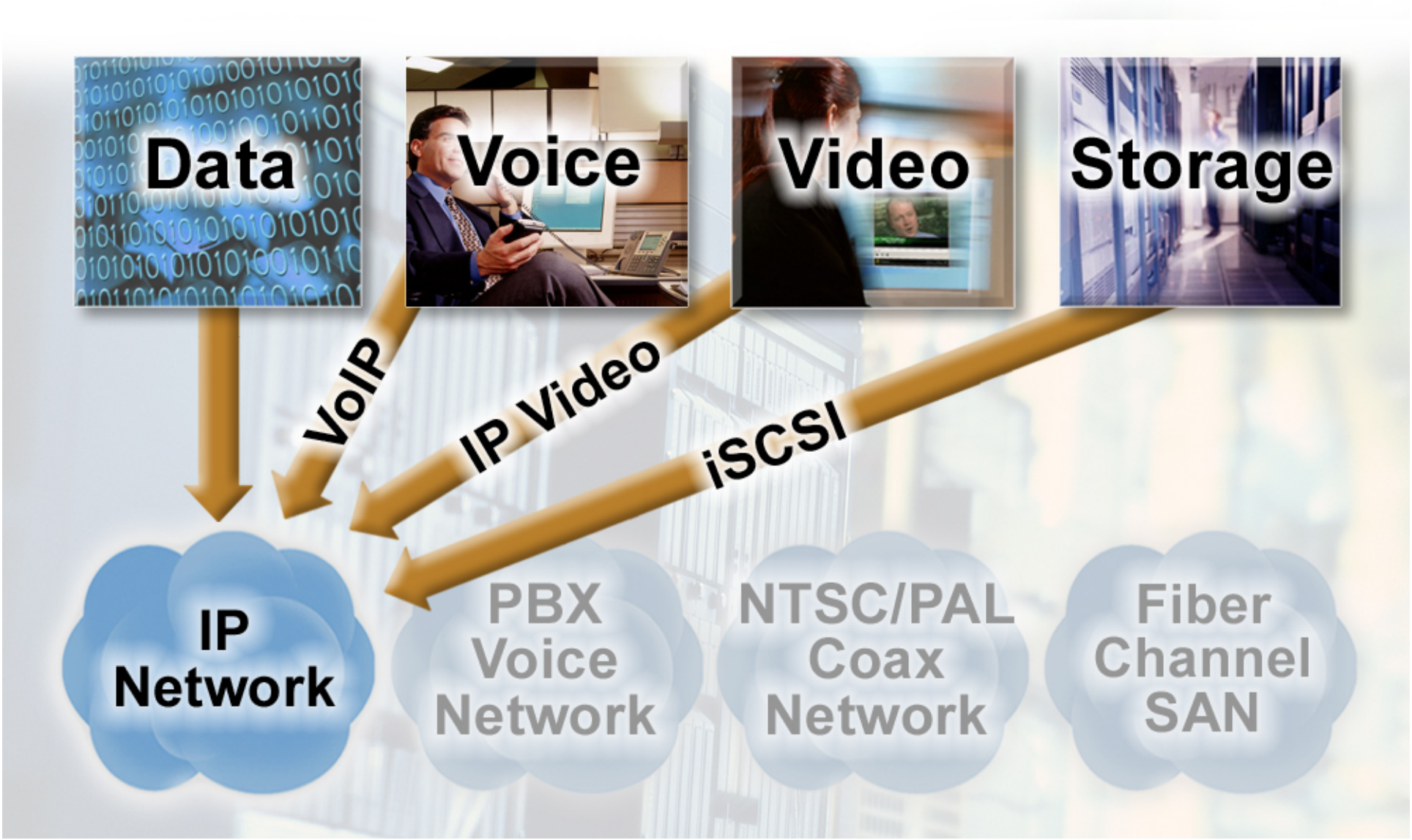
Today: Four Separate Networks



Voice, Video, and Storage Move to IP



Network-Embedded Applications
Full Service Branch

Cisco.com

IP Communications

Toll Bypass

Small Office IP Telephony

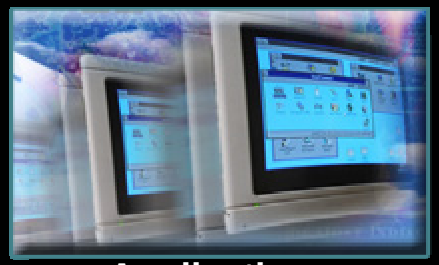
Branch Office IP Telephony

Security

IP Video Surveillance

Wireless Access Point Security

Secure Branch Infrastructure



Application Optimization & Business Video

Web Optimization

Intranets

Siebel, SAP, ORACLE

Business Video

Live broadcasts

On-demand

Connectivity

VPN for Voice/Data/ Video

Corporate Teleworker

Full Service Branch

Productivity

Decreased Costs

Protection

What is Full Services Branch and Full Service for SMBs?

Cisco Full Service Branch and Full Service for small offices is an expanding suite of intelligent application-enabling network services and adaptable "how-to" blueprints addressing security, voice & video, web application optimization, Internet mobility and connectivity services

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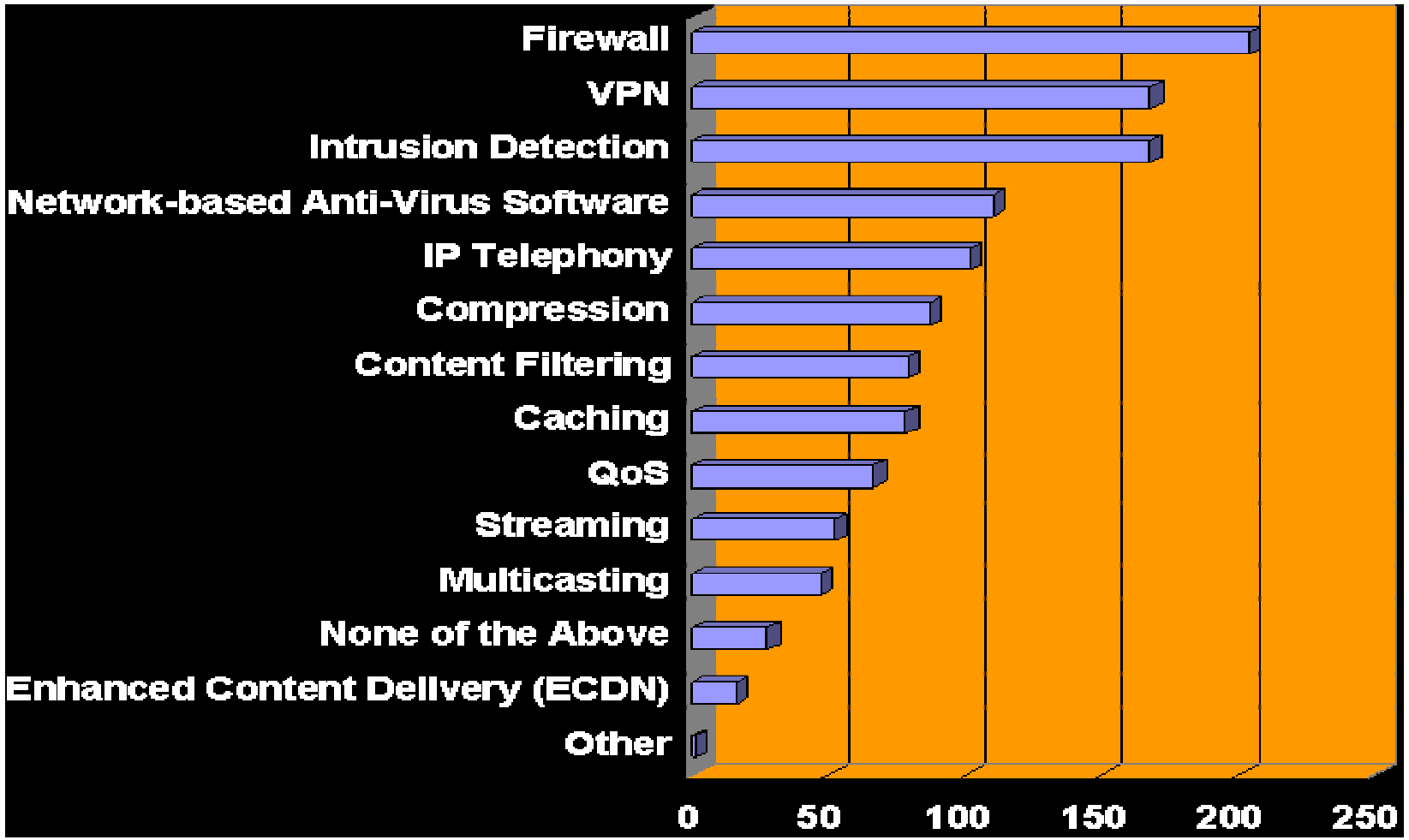
Customer Survey - Functions that Should be Router-Integrated (n=331)



Cisco sponsored study – June 2003

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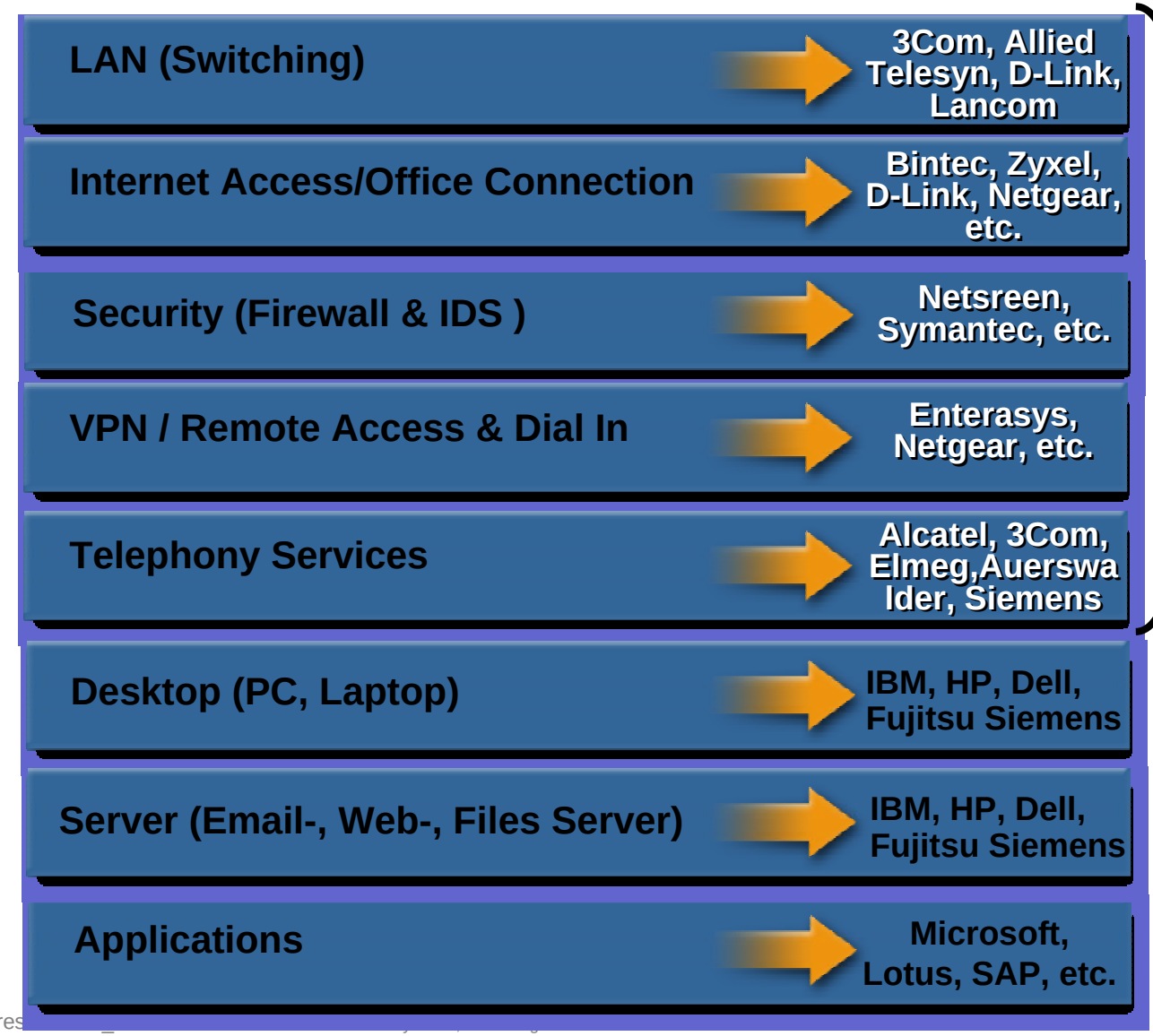
SMB Actual Network Architecture



SMBs built up the infrastructur with different vendors!

- Muliple contacts for support and purchasement
- Increased OPEX for upgrade & maintainance
- No investment protection for the future
- Complex/No upgrades of new services
- Two seperated networks (no converged networks)
- Increased maintainance costs
- Limited remote admin services

Cisco Access Routers Services

Integrated

High Performance

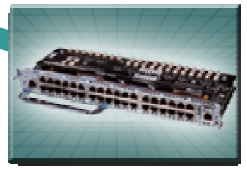
Available

Flexible

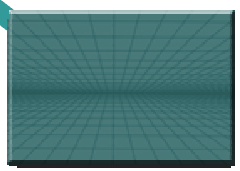
Advanced Security

Content Delivery

Voice / IP Telephony



Low Density Switching



Future

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Cisco Security Solutions

Cisco.com

Secure Connectivity	Perimeter Security	Intrusion Protection	Identity	Security Management
VPN	**Firewalls**	**Intrusion Detection Scanning**	**Authentication**	**Policy**
Cisco VPN Concentrators Cisco PIX™ Firewalls	Cisco PIX™ Firewalls Cisco FWSM Catalyst 6500	Cisco IDS Appliances Cisco IDSM Catalyst 6500	Cisco Access Control Server	Cisco Works—VPN Mgmt Solution Cisco Secure Policy Manager Web Device Managers

Cisco IOS VPN | Cisco IOS Firewall | Cisco IOS IDS

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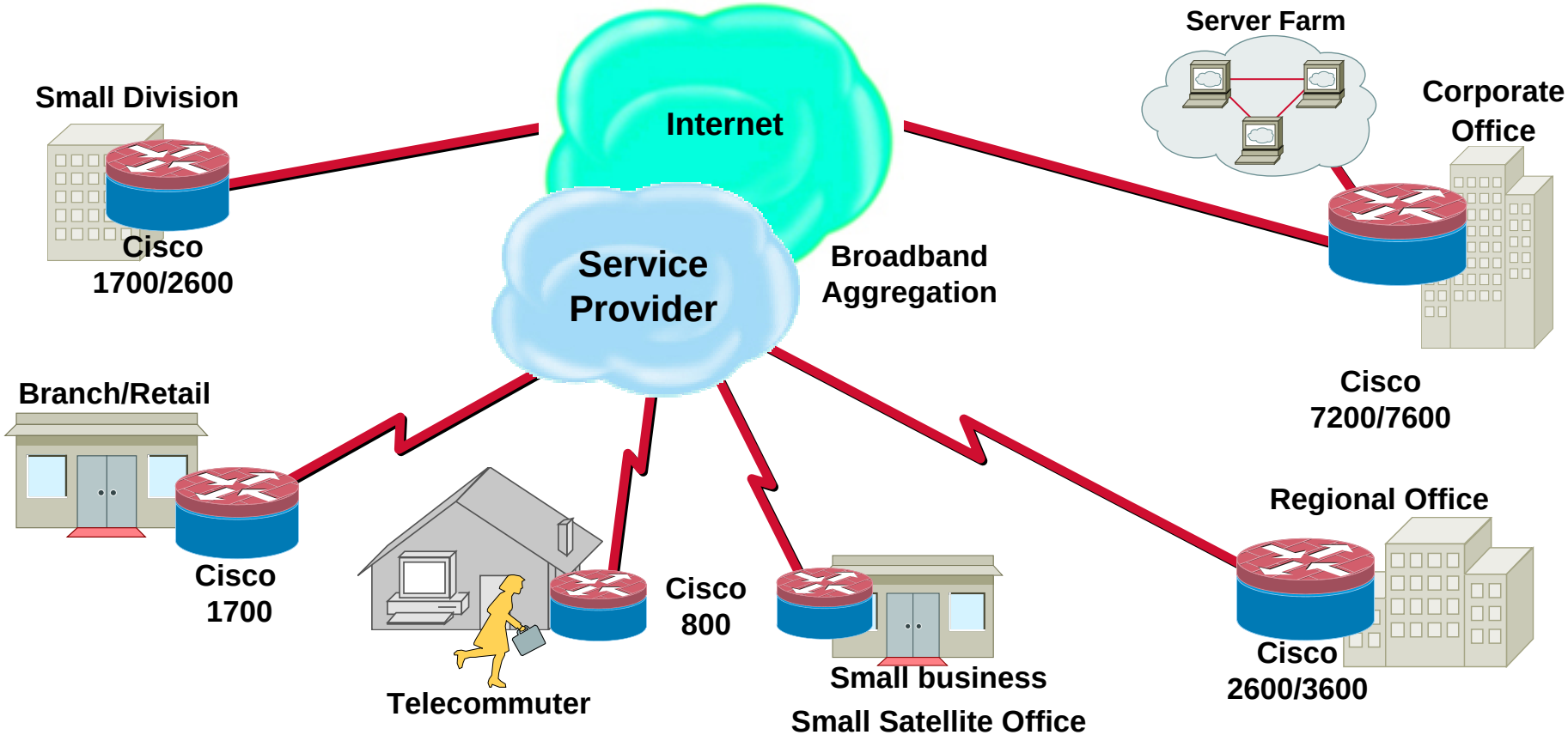
Cisco IOS Firewall Key Applications

Supported on all Cisco IOS based Platforms

Cisco 800, 900, 1700, 2500, 2600, 3600, 7100, 7200, 7400 and 7500 Series Routers; Cat5k and Cat6K (7600) switches



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Router Sensor

IOS-IDS

- Router and switch-integrated intrusion detection technology targeted at lower risk environments
- Software: IOS 12.0(5)T+
- Platforms: 1700, 2600, 3600, 7100, 7200 and 7500 routers;
- Signatures: 59
- Response: drop and reset

- in 12.2(15)T + 40 new signatures,
- Cisco 830 Router support

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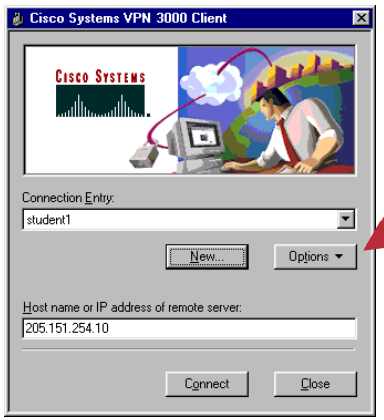
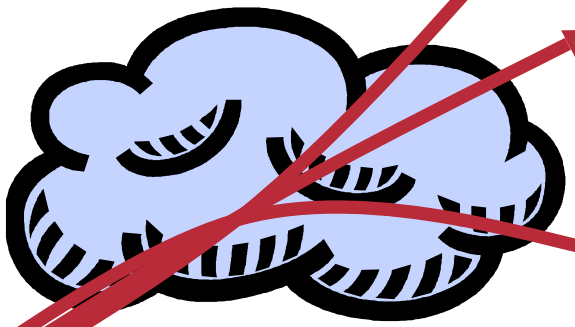
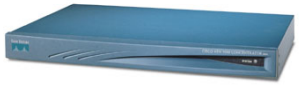
VPN Client Connectivity

Cisco's VPN Client can terminate on all of our VPN platforms!





PIX



VPN 3000

IOS

Benefits:
-Little client side configuration
-Server side pushes policy to any authenticated clients

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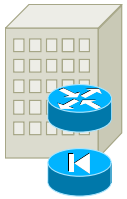
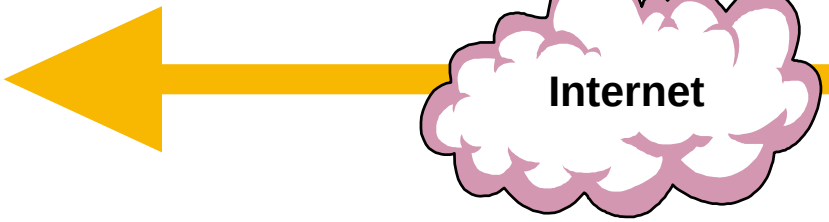
Push VPN Policy with Cisco Easy VPN

VPN functions are assigned IKE Mode Config Attributes; several parameters may be pushed at once

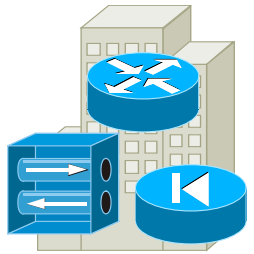
Teleworker / Small Branch Office



Mobile Workers



Central Site



Cisco Easy VPN Server on Central Site Gateways with security policy repository (Cisco CVPN 3000, Cisco IOS Router, Cisco PIX Firewall)

Attributes

- **Internal IP Address**
- **Internal NetMask**
- **Internal DNS Server**
- **Internal WINS Server**
- **Split tunnel allowed when VPN tunnel is up (remote site traffic goes in the clear)**

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Security Device Manager
SDM Wizard Options

Cisco.com

- **Overview**
  - View IOS version, hardware installed and configuration summary
- **LAN Configuration**
  - Configure the LAN interfaces and DHCP
- **WAN Configuration**
  - Configure PPP, Frame Relay, HDLC WAN interfaces
- **Firewall**
  - Two types of firewall wizard simple inside/outside or more complex inside/outside/DMZ with multiple interfaces.
- **VPN**
  - Three types of wizards to create a secure site-to-site VPN, Easy VPN and GRE tunnel with IPSec
- **Security Audit**
  - Perform a router security audit and provides easy instructions on how to lock down the insecure features found
- **Reset**
  - Restore to factory default settings.

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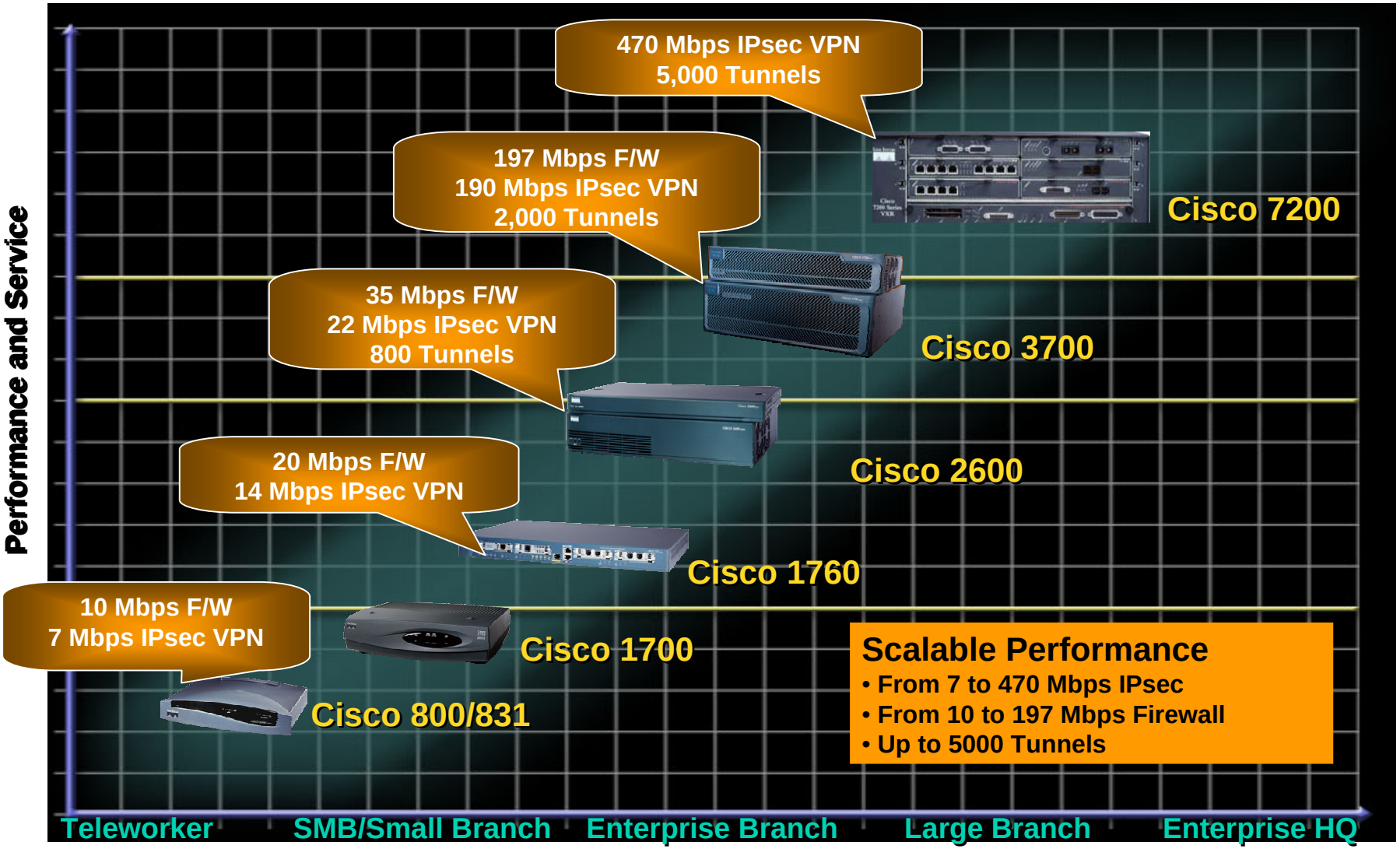
Cisco Security Router Portfolio

Cisco.com



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Cisco 1760 V³PN Bundle Details

Product Number: CISCO1760-V3PN/K9

List Price: $3,895 USD

New!

Contents:

- **1760-V Router**
  - **32MB Flash / 64MB DRAM Default Memory**
  - **4 Channel DSP**
  - **2 WIC/VIC Slots & 2 VIC Slots**
  - **1 - 10/100BaseT Port**
- **VPN Hardware Acceleration Module**
- **32MB DRAM Upgrade (to 96MB DRAM Total)**
- **IOS Feature Set: IP PLUS/VOX/Firewall/IDS/IPSec 3DES**

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Call Manager – SRST
Callmanager Express

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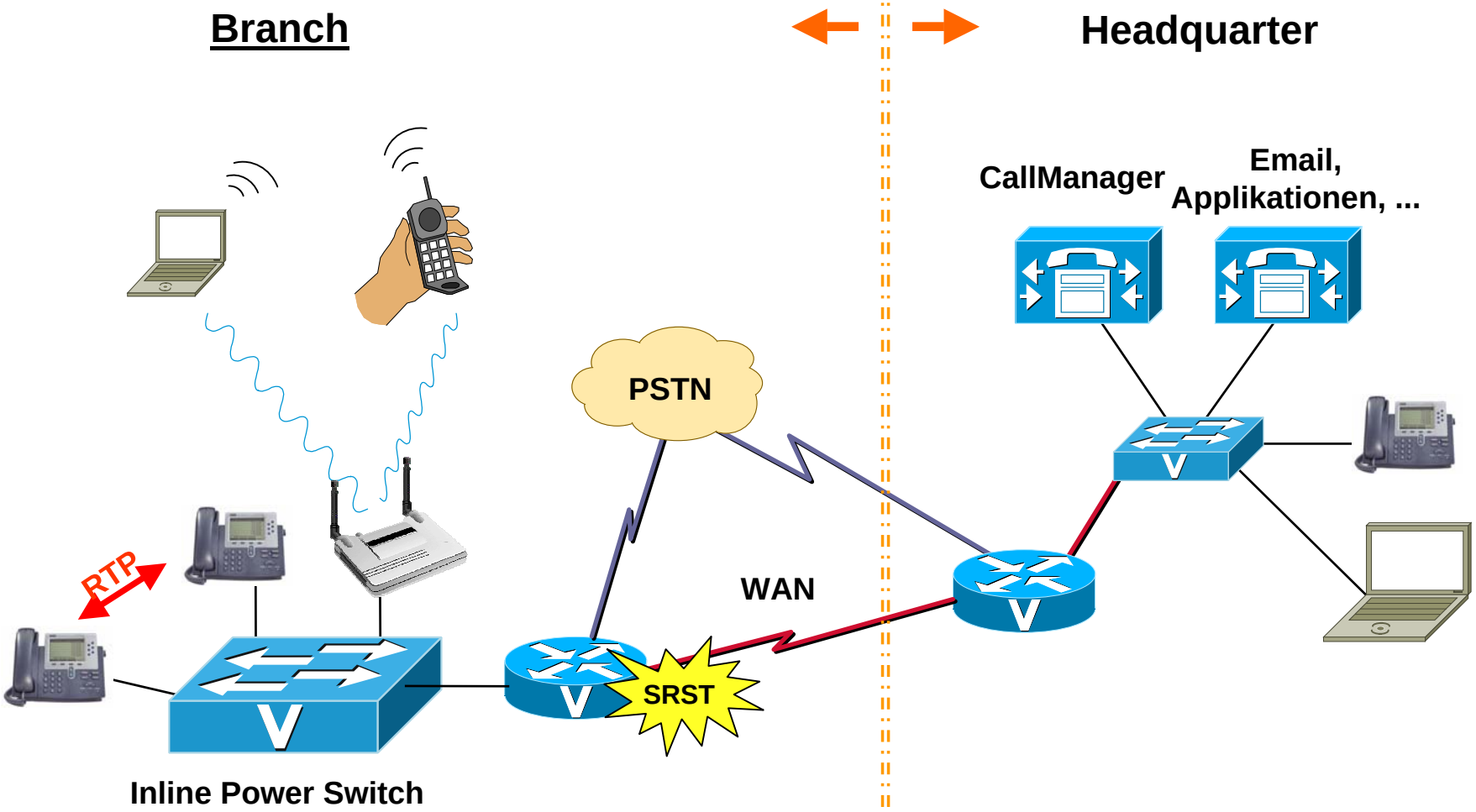
AVVID Network Design



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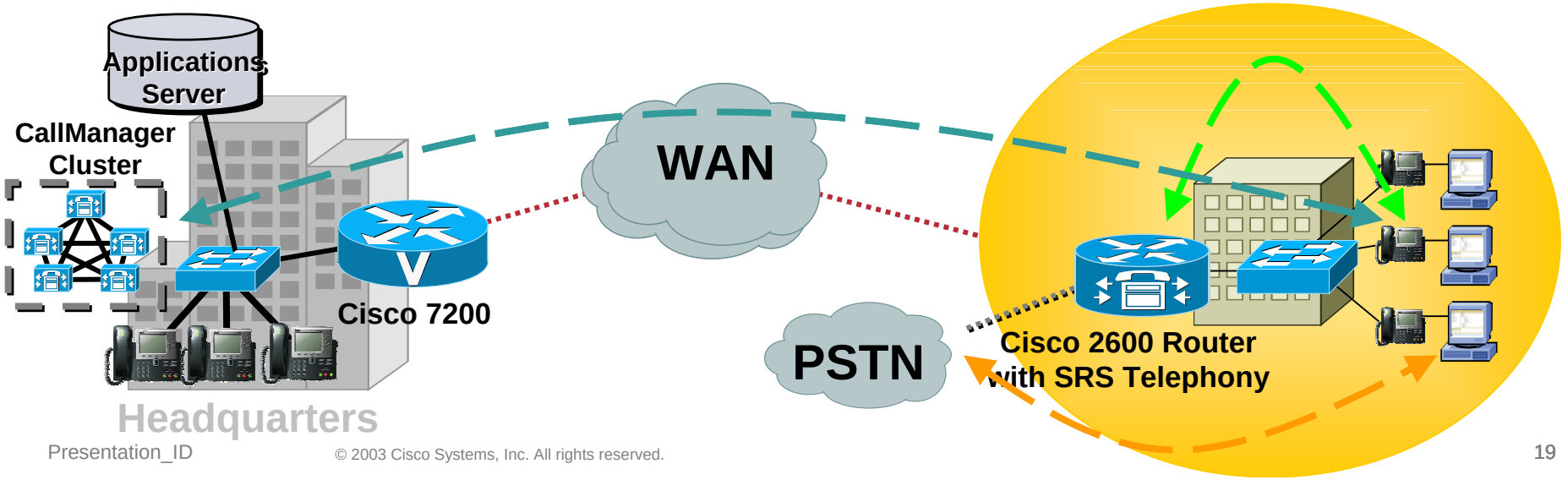
SRS Telephony – How it works

- IP Phones exchange Keep alive messages and Call Processing messages with Centrally located CallManager (CCM)
- WAN Link fails – IP phones lose contact with CCM
- IP Phones register with local router as router of last resort
- Router queries pones for configuration and auto-configures itself
- Router provides call processing for duration of failure via PSTN
- Upon restoration of WAN, IP Phones revert back to CCM



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SRS Telephony 3.0 Features

- Increase in Directory Number Maximums
- Additional Language Options for IP Phone
- Secondary Dial Tone
- Dual-Line Appearance per Button
- 3-party G711 ad-hoc conferencing
- Call Transfer with consult
- Music-on-hold multicast
- Cisco 7905 support
- European Date Formats
- Configurable System Message
- Show ephone command enhancements
- Syslog message support
- Symmetric SIP GW-to-GW DTMF relay
- SIP Register support
- SIP MWI Support
- SIP Registrar
- SIP-SRST

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Cisco SRST Router Portfolio

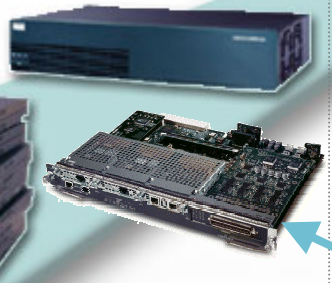
Cisco.com

PERFORMANCE & SERVICES

Over 15,000 SRST Licenses Sold!

Cisco 3725/3660/3745
- Supports up to 144/240/240 phones
- Large Branch Office Router
- Integrated routing and low density switching

Cisco 265xXM
- Supports up to 48/72 phones
- Enterprise Branch Office Router
- Versatility, Integration, and Power to Branch Offices



Cisco 3640, 3640A, 2691
- Supports up to 72 phones
- Large Branch Office Router
- Modular Multiservice Router Platform

Cisco 1751, 1760 and IAD
- Supports up to 24 phones
- SMB/Small Branch Office Router
- Optimized for Multiservice Voice/Data/Fax Integration

Cisco 261xXM and 262xXM
- Supports up to 24 phones
- Enterprise Branch Office Router
- Optimized for Multiservice Voice/Data/Fax Integration

Cisco Access Gateway Module
- Supports up to 48/192 phones in 13T/15T
- CAT 4K Module
- Onboard Encryption and DSPs

Cisco IAD2400
- Supports up to 24 phones
- SMB/Small Branch Office Router
- Cisco's premier line of Smart Integrated Access Devices

SMB/Small Branch | **Enterprise Branch** | **Large Branch**

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Cisco CallManager Express (CCME)
IP Communications for the Small Office

- Integrated Call Processing in IOS
- Key System / Low End PBX Feature Set for < 100 station market
- Intuitive / Easy to use GUI for system administration
- Complete All-in-One Solution
- Supported across all Cisco Multiservice Access routers
  - Over 3 Million Multiservice Access routers already deployed
  - Flexible Multiservice Architecture provides investment protection
- Cost effective IP Telephony solution for the small office

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Current CallManager Express Phone Portfolio: IP Phones and Analog Adaptors

Cisco.com

FEATURES

Cisco IP Phone 7940G
- Ideal Knowledge Worker Phone
- Large Pixel Display with Two Lines
- Four Dynamic “Soft Keys”
- Built-in Headset Port
- High-quality Speaker Phone
- Integrated Ethernet Switch

Cisco IP Phone 7960G
- Perfect Manager Business Phone
- Large Pixel Display with Six Lines
- Four Dynamic “Soft Keys”
- Built-in Headset Port
- High-quality Speaker Phone
- Integrated Ethernet Switch

Cisco IP Phone 7910G and Cisco IP Phone 7910G+SW
- Entry Level Phone
- Character Display
- Single Line
- Six Configurable Features
- Cisco IP Phone 7910+SW has Integrated Ethernet Switch

Cisco IP Phone 7920
- 802.11b Wireless IP Phone

Cisco IP Conference Station 7935
- High-quality speaker
- Hands-free Conference Phone
- Three Dynamic “Soft Keys”

Cisco IP Expansion Module 7914
- Attendant Console Solution
- Up to 34 possible buttons
- Monitor, Manage, & Cover calls

Cisco IP Phone 7905G and Cisco IP Phone 7912G
- Basic Business Phone
- Pixel Display
- Single Line
- Four Dynamic “Soft Keys”
- Cisco IP Phone 7912G has Integrated Ethernet Switch

Cisco IP Phone 7902G
- Entry-level Business Phone
- Single Line
- Fixed Features

Cisco ATA 186/188
- 2 FXS Ports
- 1 RJ-45 10BaseT uplink (Cisco 186 ATA)
- 1 RJ-45 10/100BaseT data port (Cisco ATA 188)

Cisco CallManager Express - Increased Platform Density

Platform	Supported Phone Density
1751, 1760, IAD2430	24
261xXM, 262xXM	36
265xXM	48
2691	72
AGM, 3725	96
3745, 3660	120

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CME 3.0 New System Level Pricing

Phone Density	License name	List Price
24	FL-CCME-SMALL	$750
48	FL-CCME-MEDIUM	$1250
72	FL-CCME-72	$2000
96	FL-CCME-96	$2600
120	FL-CCME-120	$3300

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CME 3.0

Phone Features:

- New Phones Support (7902, 7905, 7912)
- Attendant Console functionality using 7960 and 7914s—Fast Transfer, Busy Lamp, Direct Station Select, Silent Ringing options
- Do Not Disturb Softkey
- Speed-dial configuration from IP phone
- Call Fwd All Softkey on IP Phone
- Silent and Feature Ring Options
- After Hours Toll Bar Override
- Busy Lamp Field/Direct Station Select for Attendant Console phone
- European Date Formats
- Dual Line Appearance per Button
- Hook flash pass through

Manageability Improvements:

- Telephony-Service Configuration Wizard
- Auto Assignment of DNs to new IP phones
- GUI enhancements and customization
- Syslog message support for phone registration/deregistration
- AXL/SOAP capability for configuration changes
- Service Provider Class Network Management

System Features:

- Additional Language Support—Portuguese, Dutch, Danish, Norwegian, Russian, Swedish
- Night Service Bell
- Call Pickup explicit ringing extension
- Call Pickup local group ringing phone
- Call Pickup explicit group ringing phone
- Hunt Groups—Sequential, Random, and Parallel
- Call Back Busy Subscriber/Camp-On within ITS system
- Time Of Day, Day of Week, based call blocking
- Per-Call Caller ID Blocking
- Account codes CDR field entry only
- Dual Line Appearance per Button

Trunk Features:

- E1 R2 support
- SIP Trunking

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CallManager Express – Roadmap

Features available in Rel 3.1 – Feb 2004

- 7920 supported as a 7920 (Currently emulates a 7960)
- 7905, 7912 International language support
- Call Park
- H323 inter-working with CallManager, PGW and BTS
  - H.450.12 (Dynamic support for H.450.2/3)
  - Call Transfer (H.323 <-> H.323)
  - Call Forward (H.323 <-> H.323)
  - Ring back issue with CCM resolved
  - Support for CCM notification message
  - CallManager Auto-Detect
  - Local Codec Renegotiation

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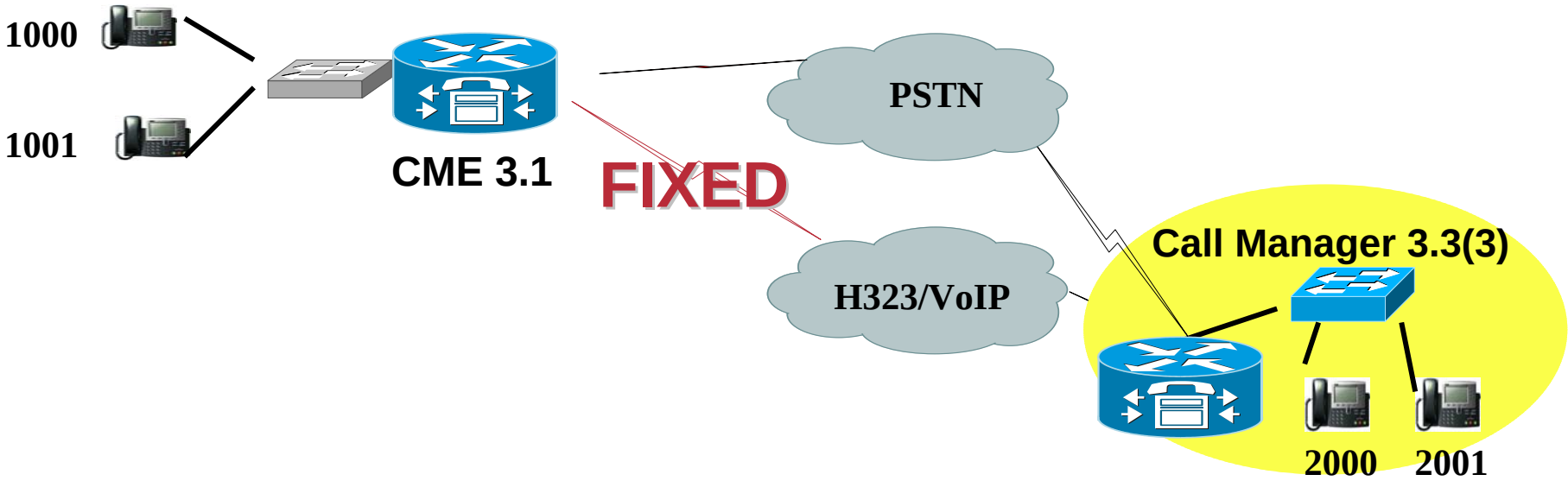
CME 3.1 – CCM 3.3(3) Interoperability



- H323 call forwards call transfer between CCM 3.3(3) and CME 3.1 are now supported using local hairpin
- Ringback provided for CME 3.1 - CCM calls
- Caller ID notification provided for CME 3.1 - CCM calls

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Cisco 1760 V³PN Bundle Details

Product Number: CISCO1760-V3PN/K9

List Price: $3,895 USD

New!

Contents:

- **1760-V Router**
  - **32MB Flash / 64MB DRAM Default Memory**
  - **4 Channel DSP**
  - **2 WIC/VIC Slots & 2 VIC Slots**
  - **1 - 10/100BaseT Port**
- **VPN Hardware Acceleration Module**
- **32MB DRAM Upgrade (to 96MB DRAM Total)**
- **IOS Feature Set: IP PLUS/VOX/Firewall/IDS/IPSec 3DES**

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Cisco Unity Express

- **Local Auto Attendant & Voice Mail system with 12-100 mailboxes, 4-8 sessions, 100 hours of storage**
- **Fully self contained - on-board processing, memory and storage**
- **Integrated in Cisco's Full Service Branch Routers**
  - **For the Small or Medium Branch Office (2600XM, 2691, 3700)**
  - **Network Module (Release 1) or AIM Form Factor (release 2)**
- **Entry level Cisco Voice storage & processing products**

Key benefits:

- **Cost-effective** for the SMB or Branch
- **Application Integration** means fewer devices to manage - less staff support
- **Choice** of configurations and scale
- **Industry standard** closed, secure and embedded OS for voice mail
- **Investment protection** migration path from CCME to CCM networks

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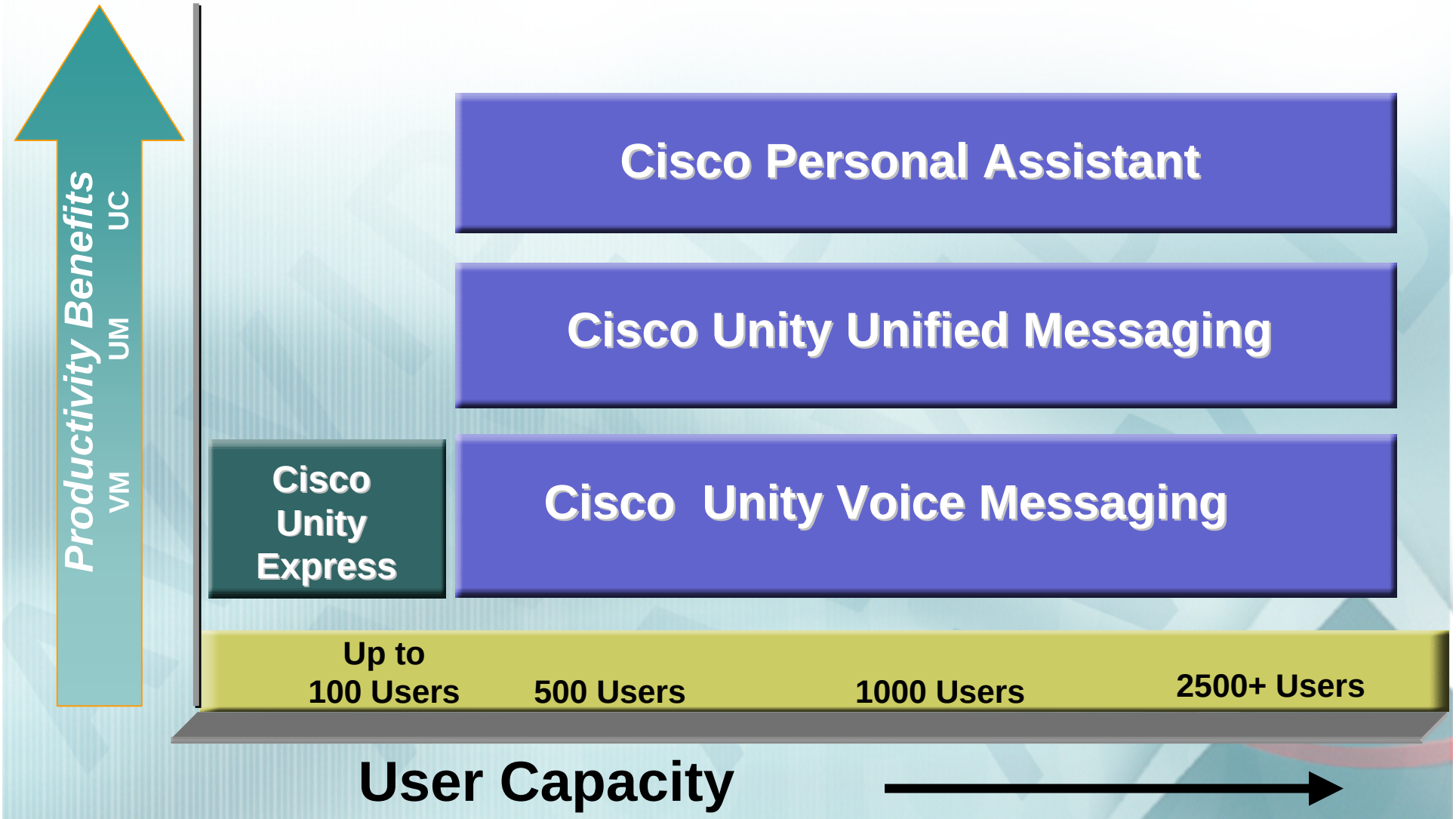
Cisco Messaging Portfolio



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Cisco Unity Express compared to Cisco Unity

Cisco Unity Express	Cisco Unity
Small office or branch	Enterprise regional/HQ or branch where advanced vm features are needed
IP Telephony w/CCME only	IP Tel, TDM PBX or dual mode
Voice Mail and basic AA	Voice Mail, UM, Full featured AA
Integrated into Cisco multiservice router for distributed voice mail applications	Centralized or distributed vm on a dedicated MCS Server
Embedded message storage	Lotus Domino or Microsoft Exchange message store
Currently, no voice mail networking outside of local systems	VPIM, AMIS, Unity Digital Networking or Unity Bridge
Currently, US English only	Broad range of language support and concurrent support for 12

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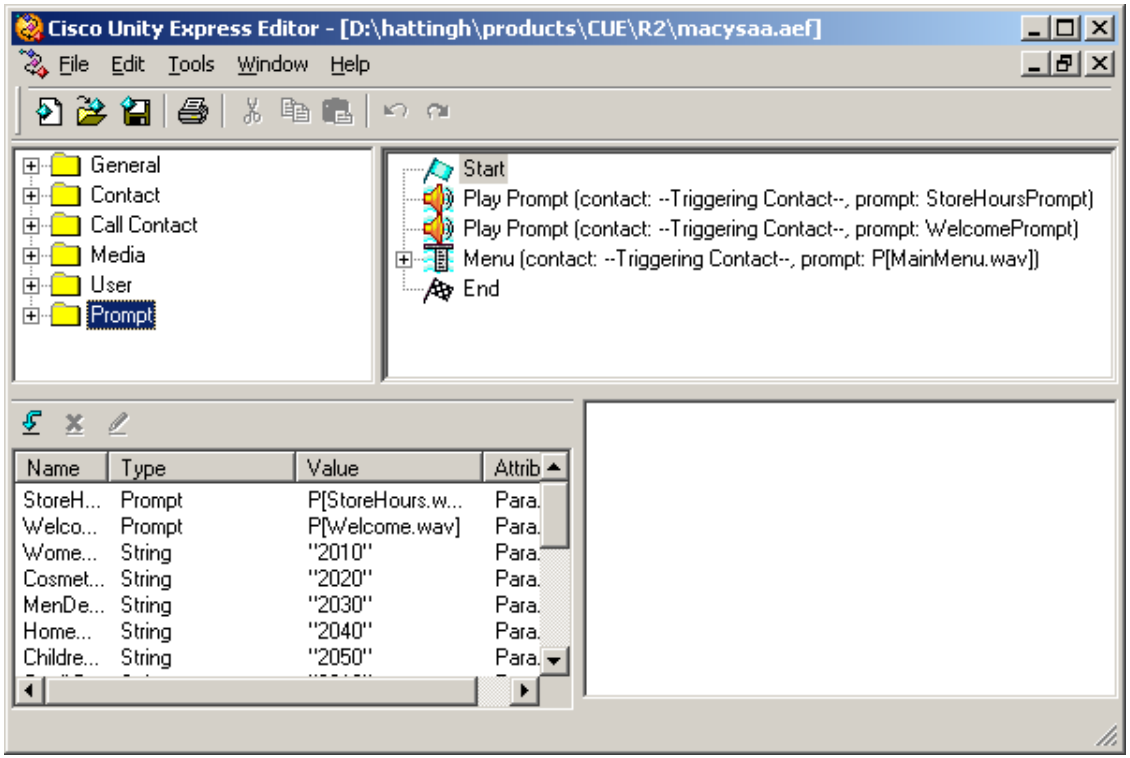
CUE AA Editor

- CUE AA Editor leverages the CRS Editor
- Offers a subset of steps for AA script creation
- Does not offer any IVR or ContactCenter steps



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CallManager Express Voice Bundles for the Small Office

CISCO1760-V-CCME **$2,995 US- A savings of $1,650!**

Includes: 1760 AC router, Cisco CallManager Express Feature License FL-CCME-SMALL (up to 24 users), PVDM-256K-4 – DSPs for up to 4 voice calls, 32 MB Flash, 128 MB DRAM, Cisco IOS IP VOX Plus Software 12.2.15ZJ for voice gateway services and features.

CISCO2611XM-V-CCME **$4,395 US - A savings of $2,000!**

Includes: 2611XM AC router, Cisco CallManager Express Feature License FL-CCME-MEDIUM (up to 48 users), a network module NM-HD-2V with DSPs for up to 8 voice calls, 32 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.**

CISCO2651XM-V-CCME **$6,595US - A savings of $4,250!**

Includes: 2651XM AC router, Cisco CallManager Express Feature License FL-CCME-MEDIUM (up to 48 users), a AIM module AIM-ATM-30 with DSPs for up to 30 voice calls, 32 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.

**** Cisco2611XM supports up to 36 phones**

$=US

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CallManager Express Voice Bundles for the Mid Size Office

CISCO3725-V-CCME-A **$9,995 list - A savings of $1,955!**

Includes: 3725 AC router, Cisco CallManager Express Feature License FL-CCME-MEDIUM (up to 48 users), a network module NM-HD-2V with DSPs for up to 8 voice calls, 64 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.

CISCO3725-V-CCME **$12,995 list - A savings of $2,655!**

Includes: 3725 AC router, Cisco CallManager Express Feature License FL-CCME-MEDIUM (up to 48 users), a AIM module AIM-ATM-30 with DSPs for up to 30 voice calls, 64 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.

CISCO3745-V-CCME-A **$13,495 list - A savings of $3,505!**

Includes: 3745 AC router, Cisco CallManager Express Feature License FL-CCME-120 (up to 120 users), a network module NM-HD-2V with DSPs for up to 8 voice calls, 64 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.

CISCO3745-V-CCME **$16,495 list A savings of $4,205**

Includes: 3745 AC router, Cisco CallManager Express Feature License FL-CCME-120 (up to 120 users), a AIM module AIM-ATM-30 with DSPs for up to 30 voice calls, 64 MB Flash, 128 MB DRAM, Cisco IOS IP Plus Software 12.2.15ZJ for voice gateway services and features.

$=US

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Cisco CallManger Express (CCME) LAN Switching Choices

- **Switching can be integrated directly into the package with the router, gateway and Call Processing or an external switch can be used**

Integrated Switching Options Include 16 Port and 36 Port Powered Switches

External Switch Options Include All of Cisco's Portfolio Including the Cisco 3550-24 PWR

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Content Networking

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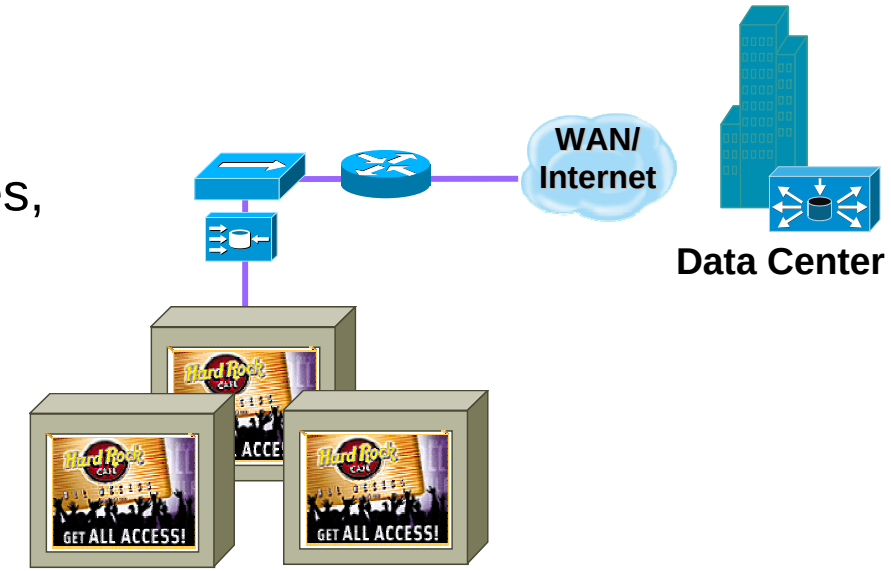
Point of Service / Point of Sale Video

Cisco.com

- Your customer locations need a better way to deliver video educational and promotional content to stores, branches, or clinics
- Looking for high-impact methods to drive in-store sales and services
- Want to improve customer satisfaction
- Seeking new revenue streams



Solution: CE-510AV, CE-565AV or Set Top Box

- **Pre-load video playlists to CEs via CDM**
- **Deliver MPEG-1, MPEG-2 to video walls, TVs, kiosks**
- **Central and/or local playback control**
- **Generate in store demand, plus advertising revenues**

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Example Revenue Generation Opportunity

Businesses can generate new revenue from partners, sponsors or vendors by charging advertisers monthly fees to play different promos in different sales or service locations

Sponsor & Location	$/Month	$/Year
Sponsor A (Chicago)	$5,000	$60,000
Sponsor B (Chicago)	$2,500	$30,000
Sponsor C (Boston)	$1,500	$18,000
Sponsor D (Boston)	$2,000	$24,000
Sponsor E (San Jose)	$2,500	$30,000
Sponsor F (San Jose)	$3,500	$42,000
Total New Revenues		**$204,000**

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Content Engine Network Module

- ACNS integrated Cisco 2600, 3600, 3700 routers
  - IOS 12.2(13)T and above, 12.3 and 12.3T
  - NM-CE-BP-SCSI-K9 for large storage requirements
- Ecosystem applications:
  - Real Server/Proxy, Windows Media, SmartFilter, Websense
- CLI, CDM, CiscoWorks Management

Customer Benefits

- Deliver application and content networking services to remote users via existing Cisco routers
- Reduce remote site operational costs and complexity
- Compact footprint, easy on-site installation, scales easily
- No impact on routing performance

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Benefits for the end user

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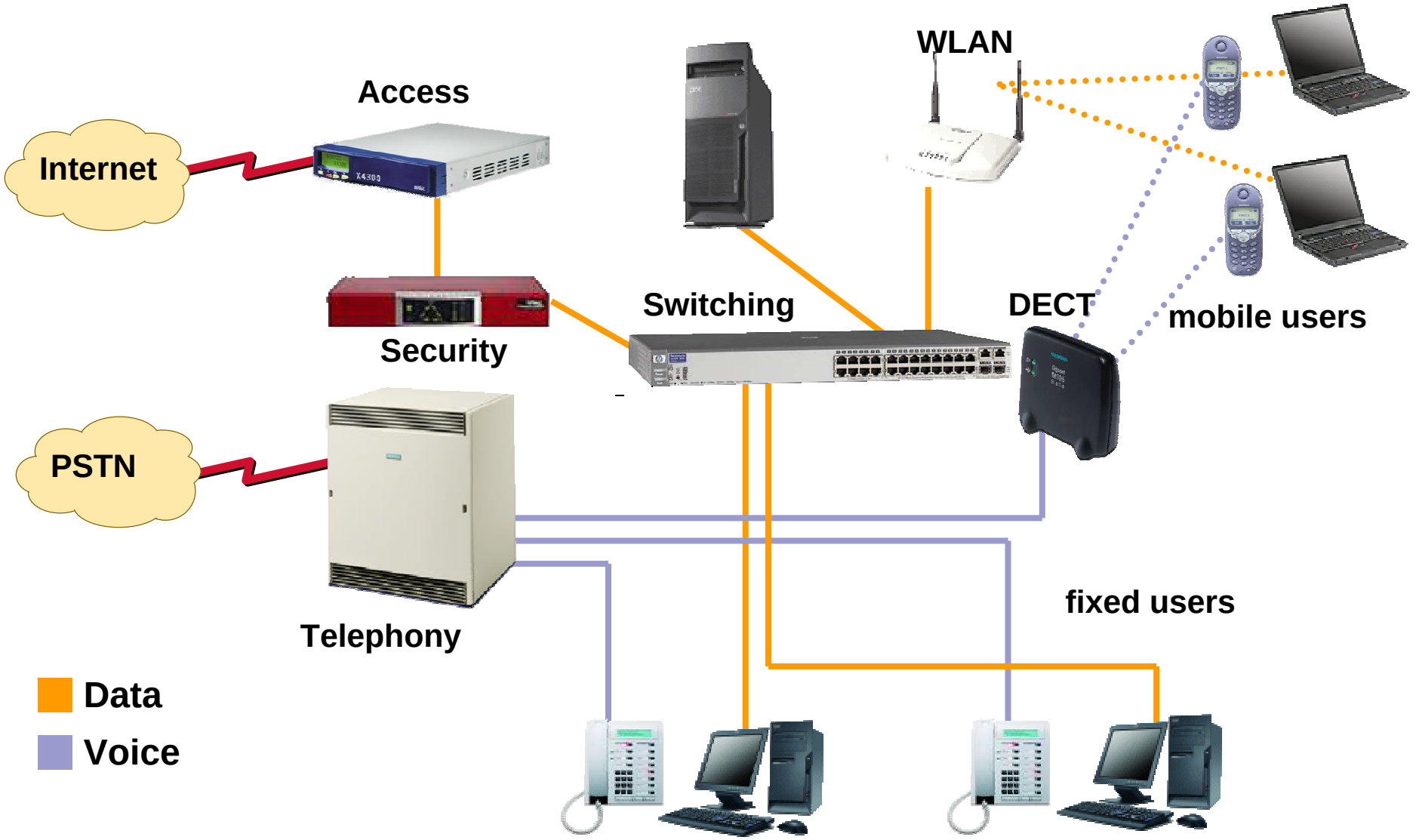
Networks Today... Multi-Vendor



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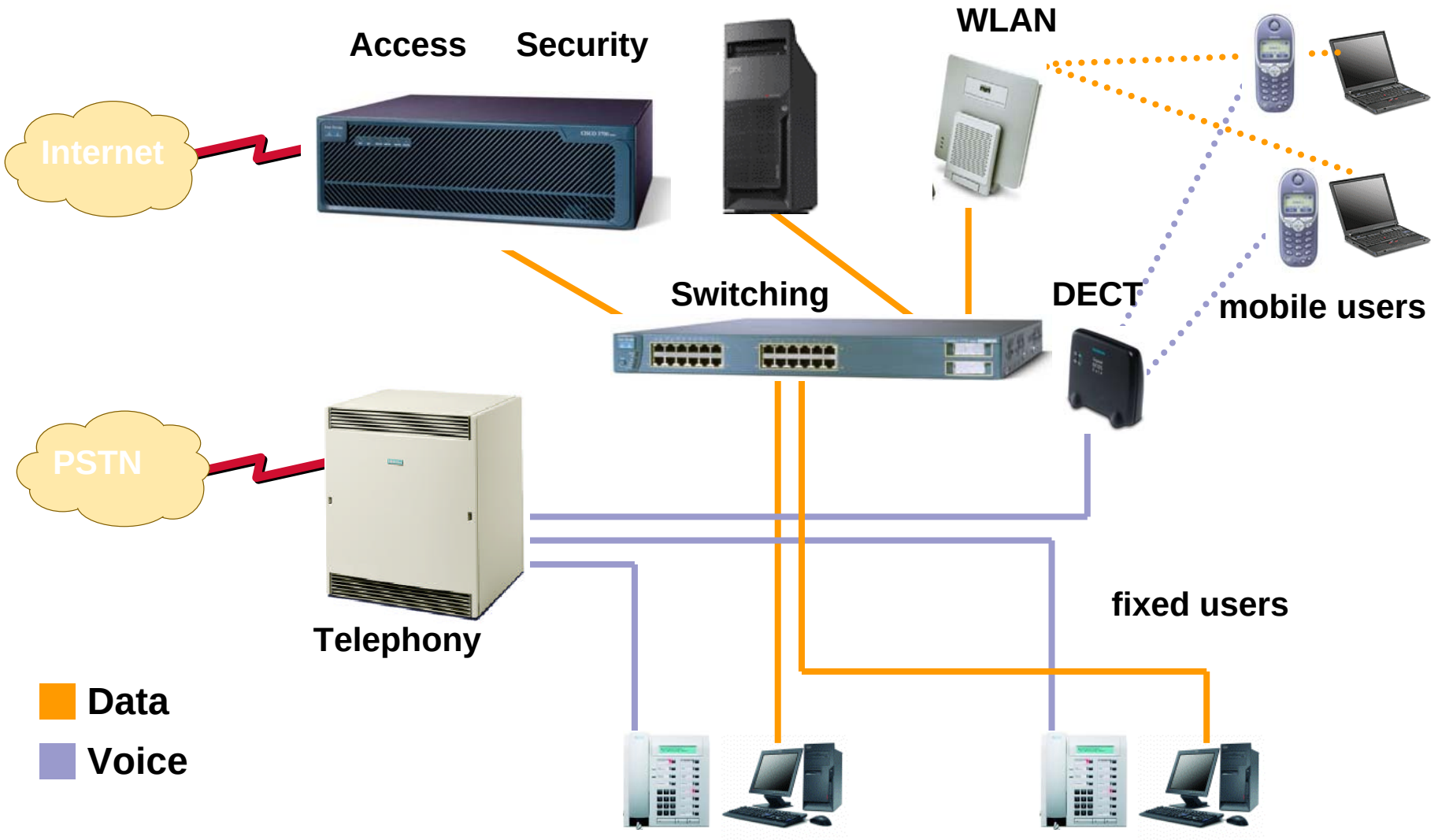
Cisco´s classical end-to-end



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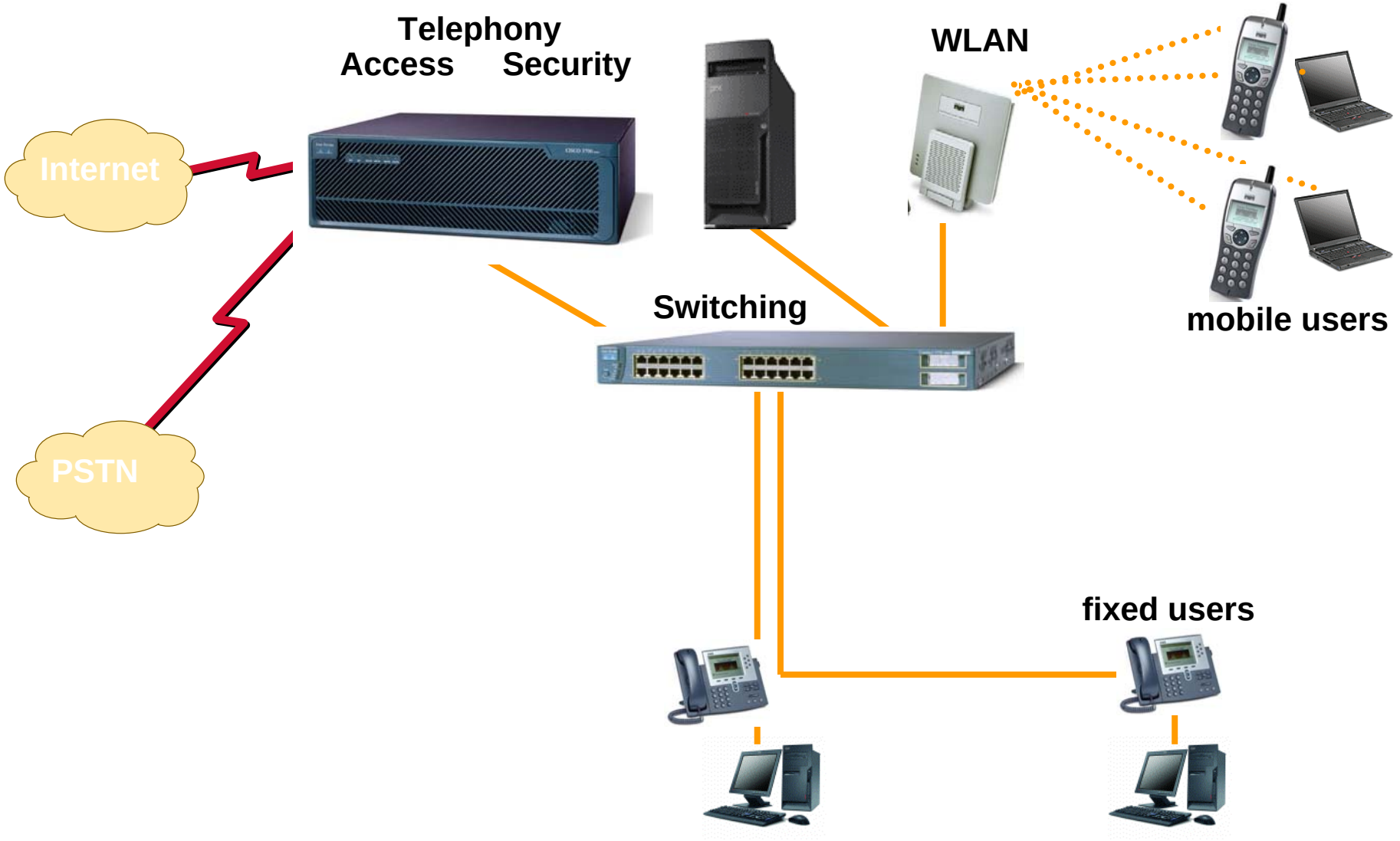
Cisco´s Full Services for SMB and Branch Offices



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Advantages Summary

Cisco.com

- **FSB adds simplicity to your communications. One system will do it all.**
- **Simplicity translates in fewer maintenance costs and lower Total Cost of Ownership.**
- **Simplicity means that when something goes wrong you know who to call !**
- **Simplicity does not mean not advanced.**
- **You will finally have access to the same services that only larger companies could afford.**

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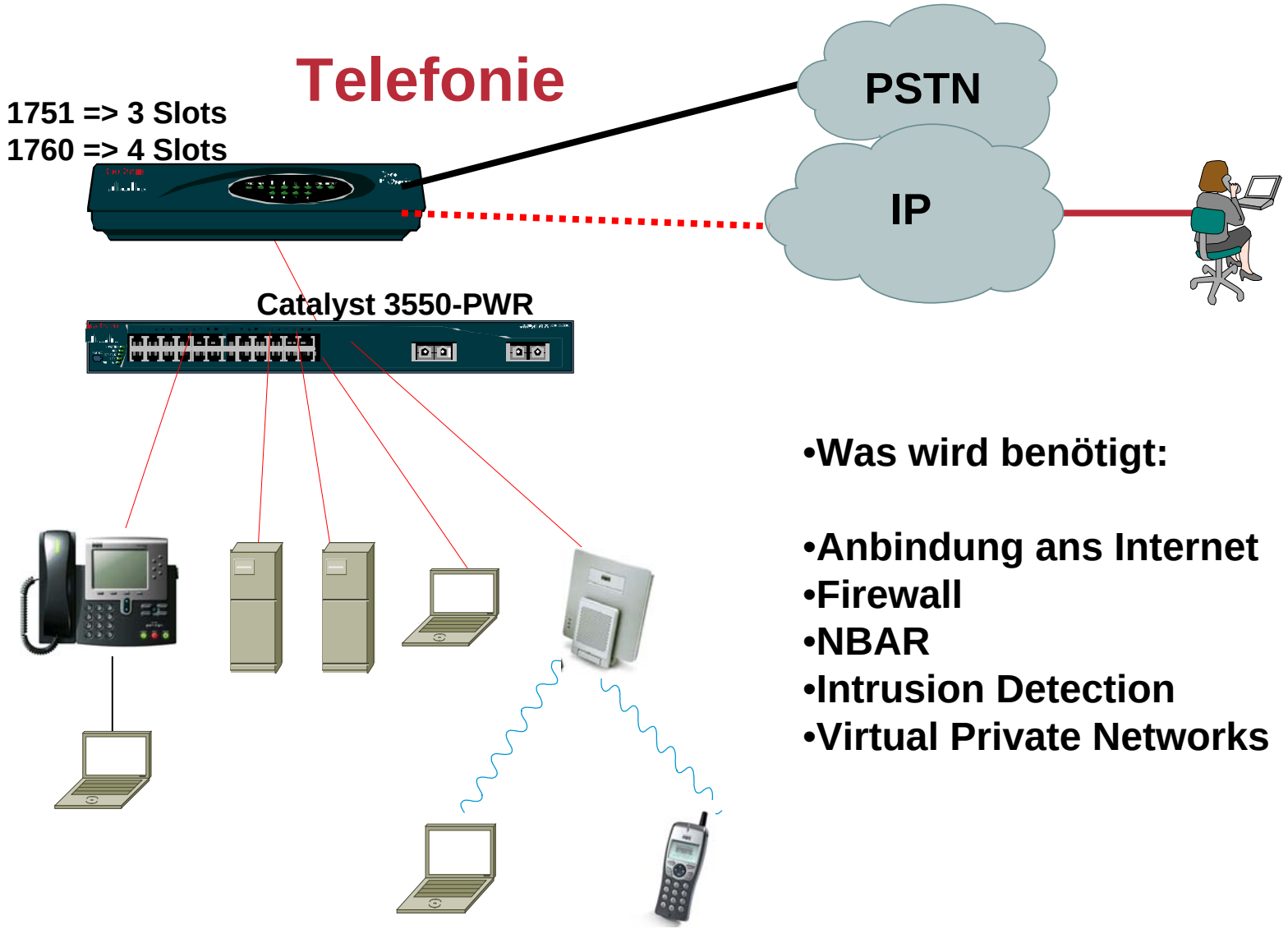
Komplettlösung: Daten, Security, Mobility, Voice



- Was wird benötigt:

- Anbindung ans Internet
- Firewall
- NBAR
- Intrusion Detection
- Virtual Private Networks

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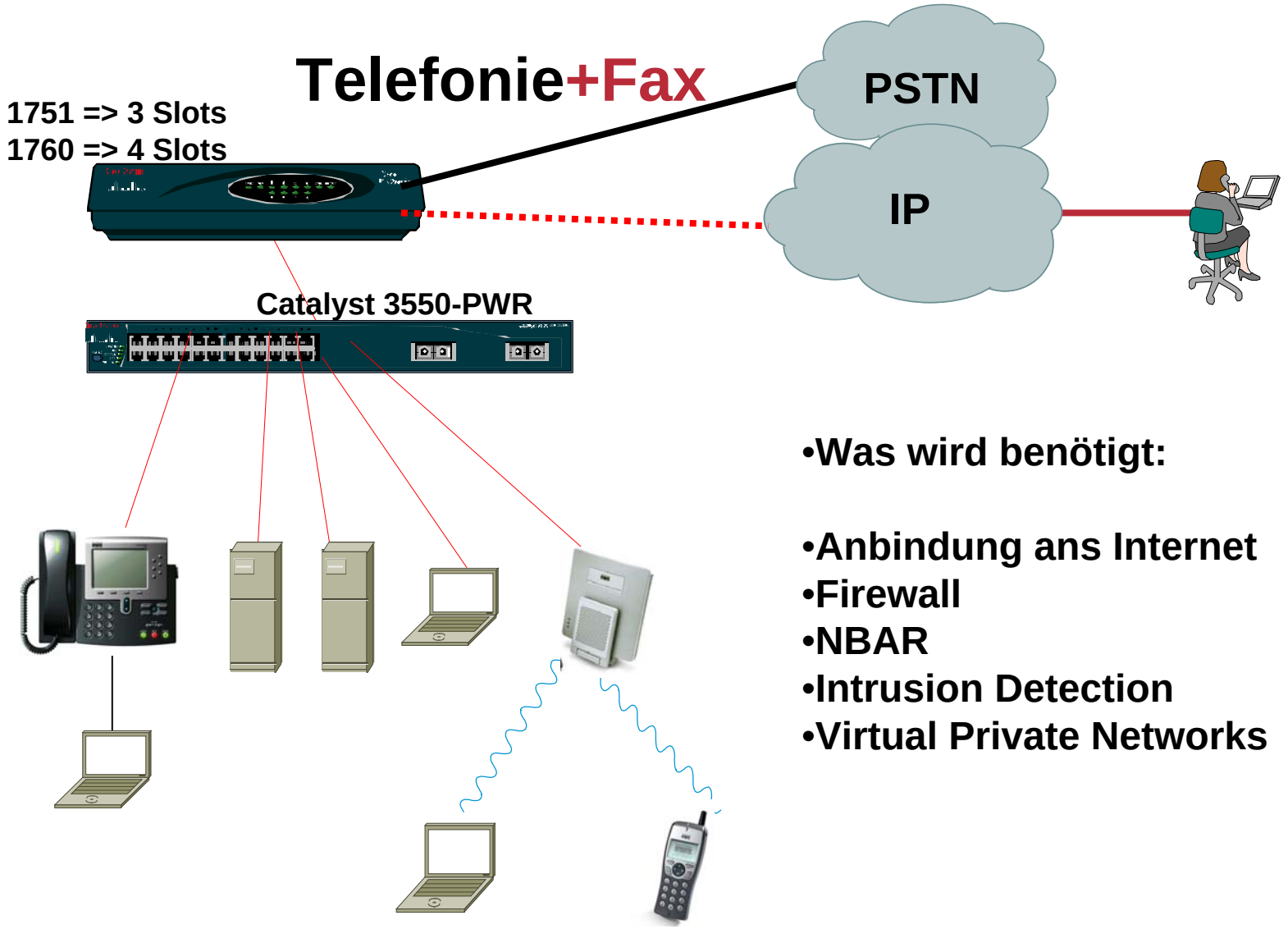
Komplettlösung: Daten, Security, Mobility, Voice, Fax



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Wireless everywhere

- **Cisco WI-FI allows you to create a wireless network able to transparently transport voice, data, video in a single infrastructure.**
- **In this way warehouse employees can freely move and still receive calls and have the possibility to use their wireless devices.**

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Fragen?

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